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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/668,411 | 09/23/2003 | Scott R. Culler | 59040US002 | 2025 |

32692 7590 07/12/2005

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| EXAMINER |
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MARCHESCHI, MICHAEL A

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| ART UNIT | PAPER NUMBER |
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1755

DATE MAILED: 07/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/668,411

Applicant(s)

CULLER ET AL.

Examiner

Michael A. Marcheschi

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 April 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6, 8-14, 16-22, 24-30, 32-38 and 40 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 8-14, 16-22, 24-30, 32-38 and 40 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>11/1/05, 3/22/05, 4/22/05, 5/12/05</u> | 6) <input type="checkbox"/> Other: _____ |

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The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

PREVIOUS REJECTION:

Claims 1-6, 8-14 ^{16-22, 24-30, 32-38, 40} ~~and 15~~ are rejected under 35 U.S.C. 103(a) as obvious over Hoopman (097) for the same reasons set forth in the previous office action which are incorporate herein by reference.

NEW REJECTION:

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-6, 8-14 ^{16-22, 24-30, 32-38, 40} ~~and 15~~ are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims ¹⁻⁵⁷ ~~1-57~~ of copending Application No. 10/668, ⁷⁵⁴ ~~754~~. Although the conflicting claims are not identical, they are not patentably distinct from each other because the reduction to practice of the copending claim would render obvious the instant claims. Although the copending claims do not literally define

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the offset vector limitation, one can look to the specification of the copending application for a definition of what is meant by the recited structure, the recited structure being clearly defined by an offset vectors as shown in figures 6A and 6B of the copending application. In addition, notwithstanding the definition defined in the specification, the claims imply that the apex of each structure is at a non central point when projected onto the base, thus reading on an offset vectors that can have a sum not approaching zero.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Applicant's arguments filed ^{4/12/06}~~4/11/05~~ have been fully considered but they are not persuasive.

Applicants admit that some of the composites of the references have an apex that is offset from the center of the composite based but argue that this is random and that the sum of the vectors does not appear to approach zero, as can be seen in figure 8. Applicants statement that the figure does not appear is an opinion and is not substantiated with facts supporting applicants position. Applicants argue that the reference does not recognize the advantage of having the distal regions offset, as required by the claims. The examiner acknowledges this but have previously stated that although the "offset vector" limitation is not literally disclosed, it is the examiners position that the figures and the disclosure of claim 1 (angle of intersection of the abrasive composites is different) shows or suggests that the composites all define offset vectors between the projection of the distant region and a center point of the base. The figures clearly show this because as can be seen from the figures, the apex (or vertex) of composites is offset

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from the center point of the base. With this structure clearly being shown, it is the examiners position that the offset vectors of the individual composites can be such that the sum does not approach a limit of zero, thus making this limitation obvious. In addition, the examiner fails to see any clear advantages defined by the claimed invention that would establish patentability of the claims over the reference (the declaration will be commented on below). Applicants argue the figures but again, applicants argument is not substantiated with facts. Finally, notwithstanding the figures (which can be considered the preferred embodiments), the examiners has also made an observation with respect to the angle of intersection (**(angle of intersection of the abrasive composites is different thus)** suggesting that the composites all define offset vectors between the projection of the distant region and a center point of the base). Applicants focus on the figures and do not argue this point made by the examiner. As is well known, "A reference can be used for all it realistically teaches and is not limited to the disclosure in its preferred embodiments" See *In re Van Marter*, 144 USPQ 421. If the apex of the reference structures can be offset, how can applicants make a statement that the offset vectors of the reference structures appear to approach a sum of zero without any evidence substantiating this?

The examiner acknowledges the declaration filed with the response but this declaration is not sufficient to overcome the previous rejection because applicants comparative example is for a peak vectors that are **summed** to zero but applicant have not clearly shown that the reference composite structure meets the requirement that the vectors are summed to zero. Since applicants statement that the sum of the vectors of the reference **appear** to approach zero is **not** convincing absent evidence, the examiner fails to see how the declaration provides evidence of unexpected results. In addition, the comparative example of the declaration requires that the vectors be

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summed to zero (not leeway) but applicants argument is based on "a sum approaching zero".

Since a "sum approaching zero" is not the same as "summed to zero" (summed to zero is interpreted to be a sum of zero but approaching zero does not necessarily mean that it is only zero-i.e. 0.1 can be considered to be a sum that approaches zero), the examiner is unclear as to how the declaration establishes unexpected results over an approach to zero.

Applicant's submission of an information disclosure statement under 37 CFR 1.97(c) with the fee set forth in 37 CFR 1.17(p) on 3/22/05 prompted the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 609(B)(2)(i). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

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In view of the teachings as set forth above, it is the examiners position that the references reasonably teach or suggest the limitations of the rejected claims.

Evidence of unexpected results must be clear and convincing. *In re Lohr* 137 USPQ 548. Evidence of unexpected results must be commensurate in scope with the subject matter claimed. *In re Linder* 173 USPQ 356.

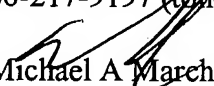
The references cited on the 1449 have been reviewed by the examiner and are considered to be art of interest since they are cumulative to or less than the art relied upon in the above rejections. The examiner acknowledges the search report but the references defined thereon are not seen to teach or suggest the claimed invention because they are silent to or fail to suggest the claimed offset vectors.

Any foreign language documents submitted by applicant has been considered to the extent of the short explanation of significance, English abstract or English equivalent, if appropriate.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael A. Marcheschi whose telephone number is (571) 272-1374. The examiner can normally be reached on M-F (8:00-5:30) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo can be reached on (571) 272-1233. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Michael A. Marcheschi
Primary Examiner
Art Unit 1755

7/8/05